

SEQUENCE LISTING

<110> Tang, Y. Tom
 Zhou, Ping
 Goodrich, Ryle
 Liu, Chenghua
 Asundi, Vinod
 Zhao, Qing A.
 Yang, Yonghong
 Ren, Feiyan
 Wang, Jian-Rui
 Zhang, Jie
 Drmanac, Radoje T.

<120> Novel Nucleic Acids and
 Polypeptides

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<140> To Be Assigned

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<150> 09/649,167

<151> 2000-08-23

<150> 09/540,217

<151> 2000-03-31

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 Tyr Tyr Pro Cys Glu His Val Ala Trp Ala Ala Asp Ala Arg Val Leu
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 His Val Asp Ser Ser Arg Trp Trp Thr Leu Ser Thr Thr Leu Trp Ala
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 Leu Ser Leu Leu Leu Gly Val Ala Arg Ser Leu Trp Met Leu Leu Lys
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Pro Arg Val Pro Gly Gly Thr Arg Ala Phe Ala Leu Arg Pro Gly Cys	
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acc tac gcg gtg ggc gcc gct tgc acg ccc cgg gcg ccg cgg gag ctg	192
Thr Tyr Ala Val Gly Ala Ala Cys Thr Pro Arg Ala Pro Arg Glu Leu	
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Leu Asp Val Gly Arg Asp Gly Arg Leu Ala Gly Arg Arg Arg Val Ser	
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Ala Pro Thr Ala Leu Ser Arg Arg Leu Arg Ala Arg Thr His Leu Pro	
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ttc gag cag tcg gag tac cgc gag cgc gtg cgg gag aac ctg gag gtg Phe Glu Gln Ser Glu Tyr Arg Glu Arg Val Arg Glu Asn Leu Glu Val 355 360 365			1104
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Leu Ile Leu Asp Ala Asn Asp Asn Ala Pro Gln Phe Leu Trp Asp Phe	
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Tyr Gln Gly Ser Ile Phe Glu Asp Ala Pro Pro Ser Thr Ser Ile Leu	
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Thr Pro Leu Ser Ala Ser Val Glu Ile Gln Val Thr Ile Leu Asp Ile	
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Gln Glu Arg Asn Gly Leu Leu Tyr Asn Gly Arg Phe Asn Glu Lys	
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Arg Phe Gly Lys Asp Ile Gly Asn Tyr Ser Cys Ala Ala Gln Gly Thr	
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Gln Thr Gly Ser Lys Lys Ser Leu Asp Leu Thr Gly Pro Leu Leu Leu	
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Gly Gly Val Pro Asn Leu Pro Glu Asp Phe Pro Val His Asn Arg Gln	
1605 1610 1615	
ttc gtg ggc tgc atg cgg aac ctg tca gtc gac ggc aaa aat gtg gac	4896
Phe Val Gly Cys Met Arg Asn Leu Ser Val Asp Gly Lys Asn Val Asp	
1620 1625 1630	
atg gcc gga ttc atc gcc aac aat ggc acc cgg gaa ggc tgc gct gct	4944
Met Ala Gly Phe Ile Ala Asn Asn Gly Thr Arg Glu Gly Cys Ala Ala	
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cgg agg aac ttc tgc gat ggg agg cgg tgt cag aat gga ggc acc tgt	4992
Arg Arg Asn Phe Cys Asp Gly Arg Arg Cys Gln Asn Gly Gly Thr Cys	
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gtc aac agg tgg aat atg tat ctg tgt gag tgt cca ctc cga ttc ggc	5040
Val Asn Arg Trp Asn Met Tyr Leu Cys Glu Cys Pro Leu Arg Phe Gly	
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Gly Lys Asn Cys Glu Gln Ala Met Pro His Pro Gln Leu Phe Ser Gly	
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gag agc gtc gtg tcc tgg agt gac ctg aac atc atc atc tct gtg ccc	5136
Glu Ser Val Val Ser Trp Ser Asp Leu Asn Ile Ile Ile Ser Val Pro	
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Trp Tyr Leu Gly Leu Met Phe Arg Thr Arg Lys Glu Asp Ser Val Leu	
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Asn Asn Tyr Leu Gln Phe Glu Val Ser His Gly Pro Ser Asp Val Glu	
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Ser Val Met Leu Ser Gly Leu Arg Val Thr Asp Gly Glu Trp His His	
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Leu Leu Ile Glu Leu Lys Asn Val Lys Glu Asp Ser Glu Met Lys His	
1780 1785 1790	
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Leu Val Thr Met Thr Leu Asp Tyr Gly Met Asp Gln Asn Lys Ala Asp	
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Ile Gly Gly Met Leu Pro Gly Leu Thr Val Arg Ser Val Val Val Gly	
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Gly Ala Ser Glu Asp Lys Val Ser Val Arg Arg Gly Phe Arg Gly Cys	
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Asn Met Asn Asn Ala Leu Lys Val Arg Val Lys Asp Gly Cys Asp Val	
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gac gac ccc tgt acc tcg agc ccc tgt ccc ccc aat agc cgc tgc cac	5664
Asp Asp Pro Cys Thr Ser Ser Pro Cys Pro Pro Asn Ser Arg Cys His	
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Asp Ala Trp Glu Asp Tyr Ser Cys Val Cys Asp Lys Gly Tyr Leu Gly	
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ata aac tgt gtg gat gcc tgt cac ctg aac ccc tgc gag aac atg ggg	5760
Ile Asn Cys Val Asp Ala Cys His Leu Asn Pro Cys Glu Asn Met Gly	
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1915	1920
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Gly Pro Ser His Tyr Gly Pro Tyr Cys Glu Asn Lys Leu Asp Leu Pro	
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Cys Pro Arg Gly Trp Trp Gly Asn Pro Val Cys Gly Pro Cys His Cys	
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Ala Val Ser Lys Gly Phe Asp Pro Asp Cys Asn Lys Thr Asn Gly Gln	
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Cys Gln Cys Lys Glu Asn Tyr Tyr Lys Leu Leu Ala Gln Asp Thr Cys	
1985	1990
1995	2000
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Leu Pro Cys Asp Cys Phe Pro His Gly Ser His Ser Arg Thr Cys Asp	
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Met Ala Thr Gly Gln Cys Ala Cys Lys Pro Gly Val Ile Gly Arg Gln	

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Cys Asn Arg Cys Asp Asn Pro Phe Ala Glu Val Thr Thr Leu Gly Cys			
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Glu Val Ile Tyr Asn Gly Cys Pro Lys Ala Phe Glu Ala Gly Ile Trp			
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Trp Pro Gln Thr Lys Phe Gly Gln Pro Ala Ala Val Pro Cys Pro Lys			
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Arg Ala Met Asn Glu Lys Leu Ser Arg Asn Glu Thr Gln Val Asp Gly			
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Ala Arg Ala Leu Gln Leu Val Arg Ala Leu Arg Ser Ala Thr Gln His			
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Thr Gly Thr Leu Phe Gly Asn Asp Val Arg Thr Ala Tyr Gln Leu Leu			
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Ala Thr Gln Asp Ala Asp Phe His Glu Asp Val Ile His Ser Gly Ser			
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Ala Leu Leu Ala Pro Ala Thr Arg Ala Ala Trp Glu Gln Ile Gln Arg			
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Ser Glu Gly Gly Thr Ala Gln Leu Leu Arg Arg Leu Glu Gly Tyr Phe			
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Ser Asn Val Ala Arg Asn Val Arg Arg Thr Tyr Leu Arg Pro Phe Val			
2225	2230	2235	2240
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Pro Leu Pro Arg Pro Leu Glu Arg Pro Val Leu Val Glu Phe Ala Leu	
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Leu Glu Val Glu Glu Arg Thr Lys Pro Val Cys Val Phe Trp Asn His	
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Cys Tyr Leu Asn Ser Leu Leu Gln Thr Leu His Phe Thr Pro Glu Phe
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gaa tta aaa tta atg aag gaa cta gct gac aac agc tgt ttg aga cct Glu Leu Lys Leu Met Lys Glu Leu Ala Asp Asn Ser Cys Leu Arg Pro 790 795 800	2515
att gat aga aat ggg aag ctt ctt tgt cca gtg ccg gac agc tat act Ile Asp Arg Asn Gly Lys Leu Leu Cys Pro Val Pro Asp Ser Tyr Thr 805 810 815	2563
ttg aag gaa gca gaa ttg aag atg gga agt tca ttg gga ctg tgt ctt Leu Lys Glu Ala Glu Leu Lys Met Gly Ser Ser Leu Gly Leu Cys Leu 820 825 830	2611
gga aaa gca cca agt tcg tct cag ttg ttc ctg ttt ttt gca atg ggg Gly Lys Ala Pro Ser Ser Gln Leu Phe Leu Phe Phe Ala Met Gly 835 840 845	2659
agt gac gtt caa cct ggg aca gaa atg gaa atc gta gta gaa gaa aca	2707

gaa agc agc atc ccg aag acg gtg tcg cat gtc ctg agc ctg ctt gtc 4099
 Glu Ser Ser Ile Pro Lys Thr Val Ser His Val Leu Ser Leu Leu Val
 1315 1320 1325

acc tgg gcc tca cgg ttt ctc gtc agc ccc gtc act gat ggg aag cag 4147
 Thr Trp Ala Ser Arg Phe Leu Val Ser Pro Val Thr Asp Gly Lys Gln
 1330 1335 1340 1345

cac tga 4153
 His *

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 <213> Homo sapiens

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 <222> (147)..(446)

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gtgccaggtg tgtccagagg agccca atg ggc agt gag gca gcc atg ggg ctg 173
 Met Gly Ser Glu Ala Ala Met Gly Leu
 1 5

gat gca ctg gtg ccc ctg gca gtg aca gtg gcc atc ttc ctg ctc ctg 221
 Asp Ala Leu Val Pro Leu Ala Val Thr Val Ala Ile Phe Leu Leu Leu
 10 15 20 25

gtg gac ctg atg cag cag cac caa cgc tgg act gca cgc tac ccg cca 269
 Val Asp Leu Met Gln Gln His Gln Arg Trp Thr Ala Arg Tyr Pro Pro
 30 35 40

ggc ccc ctg cca ctg ccc ggg ctg ggc aac ttg ctg cat gtg gac ttc 317
 Gly Pro Leu Pro Leu Pro Gly Leu Gly Asn Leu Leu His Val Asp Phe
 45 50 55

cag aac ata tac acc ttc aac cag gtg agg gag gag gtc ctg agg atc 365
 Gln Asn Ile Tyr Thr Phe Asn Gln Val Arg Glu Glu Val Leu Arg Ile
 60 65 70

ccc cac cac cag caa aca tgg gtg gtg ggt gga gcc aca gtc tgg aca 413
 Pro His His Gln Gln Thr Trp Val Val Gly Gly Ala Thr Val Trp Thr
 75 80 85

aga agc cag gct gag aag ggg aag cag att tga gggacttc ctgggggagg 464
 Arg Ser Gln Ala Glu Lys Gly Lys Gln Ile *

90

95

100

gcatttatgc atggcatgaa agatggcatt ttccaaaggc caaggaagag taaggcaagg 524
gcctggaggt ggaactgtac ttggcagtgg gcgtgcacgc ccattggcca tcatatgtta 584
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gccagggggc ctgggttagcc cttttatata ccacaattat accctggggc tctcttgtcc 704
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<211> 1621

<212> DNA

<213> Homo sapiens

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Met Thr Cys Gln Ala Trp
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cac gag gca gag gag gga cac gga att act cac agc tgt gct gtg tgc 103
His Glu Ala Glu Glu Gly His Gly Ile Thr His Ser Cys Ala Val Cys
10 15 20

att ctc tgt ggg cct agc agg gaa ggg gac agc cct gtg gca atg ggc 151
Ile Leu Cys Gly Pro Ser Arg Glu Gly Asp Ser Pro Val Ala Met Gly
25 30 35

atg aca cgg atg ctc ctg gaa tgc agt ctc agt gac aag ttg tgt gtc 199
Met Thr Arg Met Leu Leu Glu Cys Ser Leu Ser Asp Lys Leu Cys Val
40 45 50

atc cag gag aag cag tat gaa gtg att atc gtc cca act ttg ttg gtt 247
Ile Gln Glu Lys Gln Tyr Glu Val Ile Ile Val Pro Thr Leu Leu Val
55 60 65 70

act atc ttc ctc atc ctt ctt ggg gtc atc ctg tgg ctt ttt atc aga 295
Thr Ile Phe Leu Ile Leu Leu Gly Val Ile Leu Trp Leu Phe Ile Arg
75 80 85

gaa caa aga act caa cag cag cgt tct gga cct caa ggc att gcc cct 343
Glu Gln Arg Thr Gln Gln Gln Arg Ser Gly Pro Gln Gly Ile Ala Pro
90 95 100

gtt cct cca cct agg gac cta agc tgg gaa gca gga cat gga gga aat 391
Val Pro Pro Pro Arg Asp Leu Ser Trp Glu Ala Gly His Gly Gly Asn

105	110	115	
gtg gct ttg cca ctt aag gag aca tcc gtg gaa aac ttt ctg gga gct			439
Val Ala Leu Pro Leu Lys Glu Thr Ser Val Glu Asn Phe Leu Gly Ala			
120	125	130	
acc aca cct gcc ctg gct aag ctg cag gtg ccg cgg gag caa ctc tct			487
Thr Thr Pro Ala Leu Ala Lys Leu Gln Val Pro Arg Glu Gln Leu Ser			
135	140	145	150
gaa gtt ctg gag cag att tgc agt ggt agc tgt ggg ccc atc ttt cga			535
Glu Val Leu Glu Gln Ile Cys Ser Gly Ser Cys Gly Pro Ile Phe Arg			
	155	160	165
gcc aat atg aac act ggg gac cct tct aag ccc aag agt gtt att ctc			583
Ala Asn Met Asn Thr Gly Asp Pro Ser Lys Pro Lys Ser Val Ile Leu			
	170	175	180
aag gct tta aaa gaa cca gct ggg ctc cat gag gta caa gat ttc tta			631
Lys Ala Leu Lys Glu Pro Ala Gly Leu His Glu Val Gln Asp Phe Leu			
	185	190	195
ggg cga atc aaa ttc cat caa tac ctg ggg aaa cac aaa aac ctg gtg			679
Gly Arg Ile Lys Phe His Gln Tyr Leu Gly Lys His Lys Asn Leu Val			
200	205	210	
cag ctg gaa ggc tgc tgc act gaa aag ctg cca ctc tat atg gtg ttg			727
Gln Leu Glu Gly Cys Cys Thr Glu Lys Leu Pro Leu Tyr Met Val Leu			
215	220	225	230
gag gat gtg gcc cag ggg gac ctg ctc ggc ttt ctc tgg acc tgt cgg			775
Glu Asp Val Ala Gln Gly Asp Leu Leu Gly Phe Leu Trp Thr Cys Arg			
	235	240	245
cgg gat gtg atg act atg gat ggt ctt ctc tat gat ctc aca gaa aaa			823
Arg Asp Val Met Thr Met Asp Gly Leu Tyr Asp Leu Thr Glu Lys			
	250	255	260
caa gta tat cac atc gga aag cag gtc ctt ttg gcg ctg gaa ttc ctg			871
Gln Val Tyr His Ile Gly Lys Gln Val Leu Leu Ala Leu Glu Phe Leu			
265	270	275	
cag gag aag cat ttg ttc cat ggg gat gtg gca gcc agg aat att ctg			919
Gln Glu Lys His Leu Phe His Gly Asp Val Ala Ala Arg Asn Ile Leu			
280	285	290	
atg caa agt gat ctc act gct aag ctc tgt gga tta ggc ctg gct tat			967
Met Gln Ser Asp Leu Thr Ala Lys Leu Cys Gly Leu Gly Leu Ala Tyr			
295	300	305	310
gaa gtt tac acc cga ggg gcc atc tcc tct act caa acc ata cct ctc			1015
Glu Val Tyr Thr Arg Gly Ala Ile Ser Ser Thr Gln Thr Ile Pro Leu			
	315	320	325
aag tgg ctt gcc cca gaa cgg ctt ctc ctg aga cct gct agc atc aga			1063
Lys Trp Leu Ala Pro Glu Arg Leu Leu Leu Arg Pro Ala Ser Ile Arg			
	330	335	340

gca gat gtc tgg tct ttt ggg atc ctg ctc tat gag atg gtg act cta 1111
Ala Asp Val Trp Ser Phe Gly Ile Leu Leu Tyr Glu Met Val Thr Leu
345 350 355

gga gca cca ccg tat cct gaa gtc cct cct acc agc atc cta gag cat 1159
Gly Ala Pro Pro Tyr Pro Glu Val Pro Pro Thr Ser Ile Leu Glu His
360 365 370

ctc caa aga agg aaa atc atg aag aga ccc agt agc tgc aca cat acc 1207
Leu Gln Arg Arg Lys Ile Met Lys Arg Pro Ser Ser Cys Thr His Thr
375 380 385 390

atg tac agt atc atg aag tcc tgc tgg cgc tgg cgt gag gct gac cgc 1255
Met Tyr Ser Ile Met Lys Ser Cys Trp Arg Trp Arg Glu Ala Asp Arg
395 400 405

ccc tca cct aga gag ctg cgc ttg cgc cta gaa gct gcc att aaa act 1303
Pro Ser Pro Arg Glu Leu Arg Leu Arg Leu Glu Ala Ala Ile Lys Thr
410 415 420

gca gat gac gag gct gtg tta caa gta cca gag ttg gtg gta cct gaa 1351
Ala Asp Asp Glu Ala Val Leu Gln Val Pro Glu Leu Val Val Pro Glu
425 430 435

ctg tat gca gct gtg gcc ggc atc aga gtg gag agc ctc ttc tac aac 1399
Leu Tyr Ala Ala Val Ala Gly Ile Arg Val Glu Ser Leu Phe Tyr Asn
440 445 450

tat agc atg ctt tga agagtctcgg gcaagaaaca ttcattgcatg agtatatgtt 1454
Tyr Ser Met Leu *
455

cttggaatca attcctctaa gaacagagaa tgggtctttcc cagggacaca aagggagaaa 1514

tgggacatgg attcttgatc ttcttttaca catttctcgg gaaatctgaa atgatgctgg 1574

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Met Asp Ser Gln Gln Glu Asp Leu Arg Phe Pro Gly Met
1 5 10

tgg gtc tca ttg tac ttt gga atc ctg ggg ctg tgt tct gtg ata act	156
Trp Val Ser Leu Tyr Phe Gly Ile Leu Gly Leu Cys Ser Val Ile Thr	
15 20 25	
gga ggg tgc att atc ttt ctg cac tgg agg aag aac ttg agg cgg gaa	204
Gly Gly Cys Ile Ile Phe Leu His Trp Arg Lys Asn Leu Arg Arg Glu	
30 35 40 45	
gag cat gcc cag cag tgg gtg gag gtg atg aga gct gcc aca ttc acc	252
Glu His Ala Gln Gln Trp Val Glu Val Met Arg Ala Ala Thr Phe Thr	
50 55 60	
tac agc cca ttg ttg tac tgg att aac aag cga cgg cgc tac ggc atg	300
Tyr Ser Pro Leu Leu Tyr Trp Ile Asn Lys Arg Arg Arg Tyr Gly Met	
65 70 75	
aat gca gcc atc aac acg ggc cct gcc cct gct gtc acc aag act gag	348
Asn Ala Ala Ile Asn Thr Gly Pro Ala Pro Ala Val Thr Lys Thr Glu	
80 85 90	
act gag gtc cag aat cca gat gtt ctg tgg gat ttg gac atc ccc gaa	396
Thr Glu Val Gln Asn Pro Asp Val Leu Trp Asp Leu Asp Ile Pro Glu	
95 100 105	
ggc agg agc cat gct gac caa gac agc aac ccc aag gcg gaa gcc cct	444
Gly Arg Ser His Ala Asp Gln Asp Ser Asn Pro Lys Ala Glu Ala Pro	
110 115 120 125	
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Ala Pro Leu Gln Pro Ala Leu Gln Leu Ala Pro Gln Gln Pro Gln Ala	
130 135 140	
aga tcc cca ttc cca ctt ccc atc ttt cag gag gtg ccc ttt gcc cca	540
Arg Ser Pro Phe Pro Leu Pro Ile Phe Gln Glu Val Pro Phe Ala Pro	
145 150 155	
ccc ttg tgc aac cta ccc ccc ctg ctg aac cac tct gtc tcc tat cct	588
Pro Leu Cys Asn Leu Pro Pro Leu Leu Asn His Ser Val Ser Tyr Pro	
160 165 170	
ttg gcc acc tgt cct gaa agg aat gtt ctc ttc cat tcc ctc ctg aat	636
Leu Ala Thr Cys Pro Glu Arg Asn Val Leu Phe His Ser Leu Leu Asn	
175 180 185	
ctg gcc cag gaa gac cat agc ttc aat gcc aag cct ttt cct tca gaa	684
Leu Ala Gln Glu Asp His Ser Phe Asn Ala Lys Pro Phe Pro Ser Glu	
190 195 200 205	
ctg tag cctcctctca ctgaagggtgg gagctgcagg aatcaggtgc agagtaggaa	740
Leu *	
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cgctcgccccg cctgtcctga cctgcctcgc ttgcccccaa agaatgtcag ccaagtccaa      180
ggggaacccc tctcgtcct gtccagccga gggaccgccg gcagcctcca aaaccaaggt      240
gaaggaacag atcaagatca tcgtggagga tttggaatta gtcctgggcg acctgaagga      300
cgtggccaag gaacttaagg agatgaagtc ccactctgtt gcccaggcta gagtgca          357
atg gca caa tct ggg ctc act gca acc tct gcc tcc cag gtt caa gct          405
Met Ala Gln Ser Gly Leu Thr Ala Thr Ser Ala Ser Gln Val Gln Ala
   1             5             10             15

att ctc ctg cct cag cct gcc tca gtg cgc cac tac gcc tgg gtg gtt          453
Ile Leu Leu Pro Gln Pro Ala Ser Val Arg His Tyr Ala Trp Val Val
             20             25             30

gac cag att gac acc ctg acc tct gac cta cag ctg gag gat gag atg          501
Asp Gln Ile Asp Thr Leu Thr Ser Asp Leu Gln Leu Glu Asp Glu Met
             35             40             45

act gac agc tcc aaa acg gac acg ctg aat agt agc tca agt ggc aca          549
Thr Asp Ser Ser Lys Thr Asp Thr Leu Asn Ser Ser Ser Ser Gly Thr
             50             55             60

aca gcc tcc agc cta gag aag atc aaa gtg cag gct aat gca ccg ctt          597
Thr Ala Ser Ser Leu Glu Lys Ile Lys Val Gln Ala Asn Ala Pro Leu
             65             70             75             80

att aaa ccc cca gca cac cca tct gct atc ctc acg gtc ctg aga aag          645
Ile Lys Pro Pro Ala His Pro Ser Ala Ile Leu Thr Val Leu Arg Lys
             85             90             95

cca aac cct cca cca cct cct cca agg ttg aca cct gtg aag tgt gaa          693
Pro Asn Pro Pro Pro Pro Pro Pro Arg Leu Thr Pro Val Lys Cys Glu
             100             105             110

gac ccc aaa agg gtg gtt cca act gcc aat cct gta aaa acc aat ggc          741
Asp Pro Lys Arg Val Val Pro Thr Ala Asn Pro Val Lys Thr Asn Gly
             115             120             125

acc ctt cta cga aat gga ggc tta cca ggt gga cct aac aaa att cca          789

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Thr	Leu	Leu	Arg	Asn	Gly	Gly	Leu	Pro	Gly	Gly	Pro	Asn	Lys	Ile	Pro		
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Asn	Gly	Asp	Ile	Cys	Cys	Ile	Pro	Asn	Ser	Asn	Leu	Asp	Lys	Ala	Pro		
145				150					155					160			
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Val	Gln	Leu	Leu	Met	His	Arg	Pro	Glu	Lys	Asp	Arg	Cys	Pro	Gln	Ala		
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ggg	cct	cga	gaa	cga	gtt	cgg	ttt	aat	gaa	aaa	gta	cag	tac	cat	ggc	933	
Gly	Pro	Arg	Glu	Arg	Val	Arg	Phe	Asn	Glu	Lys	Val	Gln	Tyr	His	Gly		
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Tyr	Cys	Pro	Asp	Cys	Asp	Thr	Arg	Tyr	Asn	Ile	Lys	Asn	Arg	Glu	Val		
		195				200						205					
cac	tta	cac	agt	gaa	cct	gtc	cac	cca	ccg	gga	aag	att	cct	cac	caa	1029	
His	Leu	His	Ser	Glu	Pro	Val	His	Pro	Pro	Gly	Lys	Ile	Pro	His	Gln		
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225				230					235					240			
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Asn	Gly	Gly	Met	Gly	Ile	Ser	His	Ser	Asn	Ser	Phe	Pro	Pro	Ile	Arg		
			245					250						255			
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Pro	Ala	Thr	Val	Pro	Pro	Pro	Thr	Ala	Pro	Lys	Pro	Gln	Lys	Thr	Ile		
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1812